

Business Process Management and Service Oriented Architecture

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**Survey Sponsor:
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Contents

Foreword	3
Respondents	4
Job Title or Function	
Industries Represented in the Survey	
Size of the Organization Being Described	
The Geographical Location of the Respondent's Companies	
How Corporations Understand BPM Today	11
The Meaning of BPM	
The Role of IT in BPM Initiatives	
BPM Software Products	
Companies That Don't Currently Use a BPM Product	
Who Creates Business Process Applications	
How Corporations Understand SOA Today	18
How is SOA Understood	
SOA Governance	
Who Manages SOA Governance	
BPM and SOA	23
The Relationship Between BPM and SOA	
What Organizations Are Doing with BPM and SOA	
Conclusions	28

Foreword

This is the third in a series of Business Process Trends market surveys we have published to provide our members and readers with a better understanding of the business process management (BPM) market. This particular survey focuses on the current interest in Business Process Management Software and on the relationship between BPM Software and Service Oriented Architectures (SOA).

We conducted the survey in June of 2007 and invited all members of BPTrends and all visitors to the BPTrends website to participate. Our readership is comprised of individuals who are familiar enough with BPM to come to www.bptrends for information on BPM and we, therefore, believe this survey accurately reflects the population of business and IT BPM practitioners we serve. It does not, however, reflect the entire universe of business managers and IT professionals. This report is based on 348 responses, although in some cases some respondents didn't answer specific questions, in which case the number of respondents represented in the related graphs can drop to 345. The respondents came from all around the world and we want to thank all those participants for taking the time to respond.

We also want to thank **webMethods/Software AG** for sponsoring this survey, Paul Heidt for his work in the compilation, analysis and graphic representation of the data and Carolyn Potts, Managing Editor of BPTrends, for her editorial and production support.

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The Respondents

BPTrends conducted this survey in June of 2007. We sent an email to our members inviting them to participate and posted the survey on the BPTrends website to encourage participation from both members and visitors. A total of 681 people responded by filling out some portion of the survey, but we only analyzed results from the 348 who took the time to complete the entire questionnaire. (In fact, a few respondents skipped a question here and there, so the total number responding to any one question may vary from 348 to 345.)

Given the number of responses, we believe our results accurately reflect our population. Obviously, our population represents an exceptional group that is at least familiar enough with business processes to visit www.bptrends.com. They are probably slightly more sophisticated about BPM than the average business or IT manager. We believe that our results accurately reflect what managers who are already interested in BPM think about BPM and SOA.

Many of the respondents work at computer or consulting companies. In some cases we eliminated these responses from computer and consulting companies to avoid any vendor bias and to assure that our sample accurately reflected end users. By comparing results with and without the computer and consulting company respondents, we identified a few differences, but in most case we got similar results with and without the computer and consulting company respondents.

Job Title or Function

Each respondent was asked to describe his or her job or role within an organization. The largest number of respondents (37%) identified themselves as Process Practitioners or Business Analysts. The next highest category identified themselves as IT Systems Architects or Developers (23%). The third largest group identified themselves as Other (15%). A review of the written responses led us to classify 70% of the Others as either Practitioners/Analysts or Architects/Developers. We didn't identify any Other group that seemed to suggest another generic role or title.

Senior Business Executives were at 12% and 10% indicated they were IT Managers. Only 3% identified themselves as a Line-of-Business Owners. (See Figure 1.)

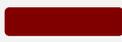
1. Which of the following best describes your role in your organization? (Choose one)			
I am a senior business executive		42	12%
I am a line-of-business "owner"		11	3%
I am a process practitioner or business analyst		127	37%
I am an IT manager		34	10%
I am an IT/systems architect/developer		80	23%
Other, please specify		53	15%
Total		347	100%

Figure 1. Respondent's job title/function

These results correspond with other surveys BPTrends has conducted. Roughly 15% of the respondents are business managers. And roughly 33% are IT managers or developers and the majority are either process practitioners or business analysts, which fall somewhere between business managers and IT developers.

Industries Represented in the Survey

The survey provides the perspective of individuals from a wide range of industries as shown in Figure 2.

2. What business is your organization engaged in? (Choose one)			
Aerospace/Defense		10	3%
Heavy Manufacturing		6	2%
Light Manufacturing		5	1%
Chemicals/Energy		6	2%
Computers/Consumer Electronics/Software		88	25%
Education		11	3%
Financial Services/Insurance		65	19%
Food/Beverage		2	1%
Government/Military		20	6%
Healthcare/Medical Equipment and Supplies		8	2%
Professional/Business Services/Consulting		59	17%
Retail/Wholesale		8	2%
Telecommunications		21	6%
Utilities		7	2%
Other		31	9%
Total		347	100%

Figure 2. The range of industries represented in the survey

Three industries account for 61% of those represented in the survey: Computers/Consumer Electronics/Software (25%), Financial Services/Insurance (19%), and Professional/Business Services/Consulting (17%).

As explained earlier, in order to focus more sharply on those industries actually developing or buying systems for core business functions we occasionally removed the computer and the consulting company respondents from the overall sample. When we filtered out responses from Computers/Consumer Electronics/Software (25%), Professional/Business Services and Consulting (17%), Education (3%), and Other (9%), Financial

Services/Insurance companies comprised by far the largest industry group with 41%. The Government/Military and Tele-communications, each with 13%, emerged as the next most active industries engaged in BPM/SOA.. The specific number of individuals responding from other industry groups was too small to draw statistically valid conclusions or comparisons.

2a. What business is your organization engaged in? (Choose one)			
Aerospace/Defense		10	6%
Heavy Manufacturing		6	4%
Light Manufacturing		5	3%
Chemicals/Energy		6	4%
Computers/Consumer Electronics/Software		0	0%
Education		0	0%
Financial Services/Insurance		65	41%
Food/Beverage		2	1%
Government/Military		20	13%
Healthcare/Medical Equipment and Supplies		8	5%
Professional/Business Services/Consulting		0	0%
Retail/Wholesale		8	5%
Telecommunications		21	13%
Utilities		7	4%
Other		0	0%
Total		158	100%

**Figure 2a. The range of industries represented in the Survey.
(Computer and consulting companies filtered out.)**

The strong interest in BPM on the part of the Financial Services, Insurance, and Telecommunications companies has been consistent for several years. This survey suggests an increased interest in BPM on the part of the government and the military.

The Size of the Organizations Being Described

We asked each respondent to indicate the overall size of the organization he or she would be describing. (See Figure 3.) Large organizations accounted for a near majority at 50%. Small organizations are in a minority with only 19% representation.

3. Which of the following best characterizes your organization's size? (Choose one)			
Large		173	50%
Medium		108	31%
Small		66	19%
Total		347	100%

Figure 3. The size of the respondent's organization

To examine the effect of removing the computer and consulting respondents, look at Figure 3a, which shows company size for respondents other than the computer and consulting respondents. As you can see, when you compare the results in Figure 3a with the results in Figure 3, the respondents from large companies rises from 50 percent to 61 percent while the number of respondents from small companies falls from 19 percent to 9 percent. In other words, most of the respondents who said they worked at computing or consulting companies work for small consultancies or small product vendors.

3a. Which of the following best characterizes your organization's size? (Choose one)			
Large		96	61%
Medium		47	30%
Small		15	9%
Total		158	100%

**Figure 3a. The size of the respondent's organization.
(Computer and consulting companies filtered out.)**

As we proceed to examine the responses to this survey, we will continue to point out interesting differences that result when different groups of respondents are omitted from the sample we are discussing.

The Geographical Location of the Respondent's Companies

We asked respondents to tell us where their organizations were located. Figure 4 shows the distribution when we look at the responses of the 346 respondents who completed the question. The largest group (45%) were from Europe. Twenty-eight percent (28%) were from North America. Nearly a quarter (23%) were from Australia/Asia with only 5% from South America and 3% from the Middle East/Africa. (Note that a few individuals indicated that their organizations were located in more than one area, bringing the total number of responses to a little more than 100%.)

4. In what country is your organization located?			
North America		97	28%
South America		18	5%
Europe		156	45%
Middle East/Africa		11	3%
Australia/Asia		79	23%

Figure 4. Where respondents' organizations are located

If we filter out the responses from Computer/Consulting industries, it changes the geographical profile somewhat. (See Figure 4a.) In this case, Australia/Asia now drop to 18% and North America's share increases to 38% from 28% and Europe decreases slightly to 42%.

4a. In what country is your organization located?			
North America		59	38%
South America		4	3%
Europe		66	42%
Middle East/Africa		4	3%
Australia/Asia		29	18%

**Figure 4a. Where respondents' organizations are located.
(Computer and consulting companies filtered out.)**

Obviously we got a large number of responses from Asian or Australian computer and consulting companies. We think the adjusted results provide a more accurate reflection of BPM activity worldwide. Even with the adjustments, however, this survey shows a marked increase in BPM in Asia and Australia. In future surveys we will separate both Asia and Australia to get a more accurate idea of the interest in BPM in this region.

This is the first survey BPTrends has conducted in which respondents from Europe have outnumbered respondents from North America. We don't think this means that there is more BPM activity in Europe. In fact, we suspect that Europe and North America are equally active in BPM and SOA, and assumed the same in previous surveys when the number of respondents from North America was slightly higher. We suspect that the slightly larger number of Europeans in this survey simply represents that fact that Europeans are very interested in BPM developments in the US and are, accordingly, visiting BPTrends in large numbers, simply because they find it a way to find out about the latest trends in the US.

We explored several correlations between geography and industry, company size, job title, and so forth, and didn't find any significant differences between respondents from North America and Europe.

How Corporations Understand BPM

There is obviously no one correct way to define a term like “Business Process Management” or an acronym like “BPM.” Different groups use different definitions. At BPTrends, we use terms as we believe most of our readers use them. We understand, however, that some readers prefer a different emphasis. Here’s our definition:

Business Process Management (BPM) is, at the moment, the generic term for a corporate concern with how work gets done and with all aspects of changing or improving how work gets done.

This definition emphasizes the wide range of activities, from Six Sigma, SCOR and balanced scorecard, to process redesign and new software approaches, to automating the management of processes that are often included under the BPM umbrella. At the same time, it puts a subtle emphasis on the enterprise taking responsibility for managing processes and treating them as corporate assets.

Business Process Management Software (BPMS) is a subset of BPM. BPMS is a specific suite of software technologies that can be used to model and then automate the execution of a business process at runtime.

You can do BPM without using software. You can automate BPM without using BPMS. If you want to have better control over your processes and build-in greater flexibility, however, you should consider BPMS. BPMS allows a company to deliver a more productive, coordinated experience for all process stakeholders, for managers and employees, for partners and suppliers, for regulators, and for customers. In essence, BPMS software represents an actual business process, gets information from the actual process as it is executed, and uses that information to control the on-going flow of the process. And it does this in a way that makes it easy for managers and business analysts to monitor the on-going process and implement rapid changes in the process, as needed.

Of course, our definitions may not be those of our respondents and we asked questions to see if our use of BPM and BPMS accurately reflected the usage of those who were taking part in this survey.

How is BPM Understood By Our Respondents

We asked respondents about the depth of their understanding of BPM. Figure 5 provides an overview of their responses. Over half of the respondents report that they have practical experience in delivering successful BPM projects. Forty-one percent (41%) have some theoretical understanding of BPM, while only 7% of those participating in the survey report being new to BPM.

5. How would you characterize your understanding of BPM? (Choose one)			
I am new to BPM and have a limited understanding		25	7%
I have some theoretical understanding of the general concepts and benefits of BPM		141	41%
I have practical experience delivering successful BPM projects		182	52%
Total		348	100%

Figure 5. How organizations understand BPM

We do not assume that fifty-two percent of the world’s business managers have practical experience delivering BPM projects. Instead, as we indicated earlier, we assume that BPTrends readers and visitors are an exceptional group that is much more familiar with processes than the average business manager. Thus, in effect, we conclude that 52% of managers who are interested in business process work – as evidenced by the fact that they visit www.bptrends.com – have some practical experience in delivering a successful BPM project.

The Meaning of BPM

To explore how readers understand the term “BPM” we asked respondent’s to choose one of four definitions of BPM. (See Figure 6.)

6. Which of the following best describes what BPM means to you? (Choose one)			
An approach to process redesign or improvement		61	18%
A cost-saving initiative focused on increasing productivity		21	6%
A set of software technologies for automating and managing runtime business processes		79	23%
A management philosophy that focuses on organizing the business around its business processes		187	54%
Total		348	100%

Figure 6. How organizations understand BPM

As you can see by glancing at Figure 6, a significant majority (54%) of our respondents indicated that they understand BPM to refer to “a management philosophy that focuses on organizing the business around its business processes.” This is our own definition.

The next largest segment (23%) sees BPM as a set of software technologies for automating and managing runtime business processes. We would argue that BPM is broader than a software technology, but clearly a significant minority prefers this definition and, as we shall see, it leads to confusion about the meaning of “BPM” in some later questions.

Eighteen percent (18%) associate BPM with an approach to process redesign or improvement. And a mere 6% think of BPM as a means of increasing productivity.

We asked this same question when we conducted a survey of our readers in February of 2006. At that time, the number of respondents who indicated that BPM was a management philosophy was 43% while only 17% indicated they thought BPM was a software technology. In other words, more now consider BPM a management philosophy, but, by the same token, more think of it as an IT technology and fewer think it is either just a redesign and improvement methodology or a cost saving initiative.

If we focus only on the answers of respondents who identify themselves as IT managers or developers, then the percent who think BPM is a set of software technologies goes up to 44%, and those who think BPM is a management philosophy drops to 38%.

Similarly, if we focus only on those with business or process practitioner roles, then those who think that BPM is a set of IT technologies drops to 13% while those who think BPM is a management philosophy goes up to 57%.

We will see this problem again as we examine the responses to other questions. There is no general agreement on the use of the term “BPM.” BPMS vendors often refer to their products as BPM products which confuses the market. Clearly, many IT people believe that BPM and BPMS are synonyms, but business people are much more likely to make a sharp distinction between BPM and BPMS.

The Role of IT in BPM Initiatives

We also asked how the respondents view the role of IT in their organization’s process management initiatives. (See Figure 7.) Thirty-four percent (34%) said IT has a critical role and performs that role successfully. Another 25% think IT has a critical role but that priorities, time, and cost constraints prevent IT from playing its role as well as it could. Seventeen percent (17%) think that a lack of tools, technology, and infrastructure make it hard for IT to play its role as well as it could. Only 3% of our respondents suggest that IT has no role to play in their process management initiatives.

7. How is the role of IT perceived in your organization's process management initiatives? (Choose one)			
It has a critical role and does so successfully		119	34%
Should have a more critical role but priorities and time/cost constraints prevent this		86	25%
Should have a more critical role but tools, technology and infrastructure prevent this		58	17%
Has a limited role to play. Primary responsibility for BPM initiatives is assigned to other groups		73	21%
Has no role to play		10	3%
Total		346	100%

Figure 7. How is the role of IT perceived in your organization's process management initiatives?

It is interesting to note, however, that when we filter the responses to examine just the responses of business managers and process practitioners, those who think IT has a critical role drops to 26%, but, similarly, those who think IT has no role to play drops to 2%. If we filter the responses to examine only the responses of IT managers and practitioners, then those who think IT has a critical role jumps to 49%.

Interestingly, European respondents are more likely to think IT has a critical role to play in BPM initiatives (41%) than respondents from North America (30%).

BPM Software Products

This question and the next, more than any of the others, indicates the confusion in the current BPM market. We started by asking respondents if they had a BPM software product. We didn't discriminate between Business Process Modeling, Analysis and Design (MAD) products and Business Process Management Software (BPMS) products. Given the diverse way people use these terms, we can't be sure if the respondents are referring to MAD or BPMS products. All we can conclude is that 67% of all respondents use some kind of BPM software product.

8. Do you currently use a BPM software product? (Choose one)			
Yes		231	67%
No		114	33%
Total		345	100%

Figure 8. Do you currently use a BPM software product?

If we filter out the respondents from consulting and computer companies, we find that 55% of the respondents indicated they use a BPM product. (See Figure 8a)

8a. Do you currently use a BPM software product? (Choose one)			
Yes		87	55%
No		70	45%
Total		157	100%

**Figure 8a. Use of BPM software product.
(Computer and consulting companies filtered out.)**

If we examine the responses from respondents from Europe, we find that 78% answer Yes (Figure 8b) while only 53% of the respondents from North America answer Yes.

8b. Do you currently use a BPM software product? (Choose one)			
Yes		121	78%
No		34	22%
Total		155	100%

Figure 8b. Use of BPM software product - Europe

If we focus on company size, then large companies are more likely to have a BPM product (73%) than medium (65%) or smaller companies (53%). (See Figure 8c.)

8c. Do you currently use a BPM software product? (Choose one)			
Yes		124	73%
No		46	27%
Total		170	100%

Figure 8c. Use of BPM software product - Large companies

Companies That Don't Currently Use a BPM Product

We asked companies that indicated that they did not currently use a BPM product to indicate if they had plans to acquire one. The results are shown in Figure 9. In this case, you must keep in mind our discussion about the confusion regarding the distinction between MAD and BPMS products. We can't be sure if the respondents are indicating they are considering acquiring a Modeling, Analysis and Design tool, or a BPMS tool.

If you consider only the respondents who say that their companies are not using a BPM software product at the moment, and ask them about their plans, you see that 31% have no plans to acquire a BPM product, 35% are researching BPM and 34% are either looking at BPM products or definitely plan to acquire a BPM product in 2007. (See Figure 9.)

9. If you do not use a BPM software product at the moment, are you considering acquiring one? (Choose one)			
No, no plans		58	31%
We are researching the topic		65	35%
We are actively looking at BPM software products		39	21%
We plan to purchase a BPM software product this year		25	13%
Total		187	100%

Figure 9. If not using a BPM product, are you considering acquiring one?

A quick comparison of the responses from Europe and North America suggests that European companies and North American companies are about equally likely to purchase BPM software this year.

Who Creates Business Process Applications

Figure 10 looks at what types of individuals in an organization are tasked with creating or implementing a BPM system. Each respondent could choose more than one role for his or her company.

10. What roles are responsible for creating business process systems in your organization? (You may choose more than one)			
Business Analyst		227	66%
Governance Specialist		32	9%
Enterprise Architect		157	46%
Developer		69	20%
Business user		134	39%
Other, please specify		27	8%

Figure 10. What roles are responsible for creating business process systems in your organization?

Looking at Figure 10 we see that Business Analysts are the most likely people to be responsible for creating new business process systems. Enterprise Architects (46%), Business Users (39%), and Developers (20%) are also commonly given the responsibility.

How Corporations Understand SOA

A Service Oriented Architecture (SOA) defines a way to organize software systems and their associated infrastructure and middleware elements. In essence, SOA relies on the Internet and a number of Internet protocols (E.g. SOAP, UDDI, XML, WSDL) to manage how software elements are located and connected when they are to be used.

A “service” is simply a software component that can be called via the Internet and which provides clearly specified functions. A few years ago we would have called a service a software component. If you want, you can think of a service as a software component designed to be used in an Internet environment.

There has been considerable discussion, recently, of BPM and SOA governance. Governance is not Management. **Governance** is concerned with goals, principles, organization charts that define who can make what decisions, frameworks, policies, rules, and processes that define or constrain day-to-day management activities. **Management** is a human activity. Managers respond to daily circumstances by taking actions. Ideally, managers should be guided or constrained by established governance documentation.

The ultimate governance in a corporation is established by the laws governing the behavior of corporations and by the board of the corporation that establishes specific policies and frameworks for the individual company. The board also manages when its members vote to hire or fire an executive, to spend money, or acquire another firm.

SOA Governance is typically a special area of governance within the broader domain of IT Governance. SOA Governance consists of the policies, frameworks and processes established by IT to control those engaged in day-to-day SOA activities. Broadly, SOA Governance establishes policies or procedures for defining services, acquiring or developing services, registering and saving services in a repository, controlling access to services, publishing services, delivering services, and managing service changes.

Some would simplify the above and say that SOA Governance consists of policies, frameworks and processes for the overall control of a corporate SOA initiative, for control of the design or acquisition of services and for the runtime or lifecycle control of services. Most would also associate SOA Governance with tools, including some kind of registry and a repository to help manage the services and metadata.

However SOA Governance is defined, any company that wants to support a large-scale SOA effort will need to define and enforce a large number of policies to assure that services are correctly defined and can be easily accessed by the processes that will use them. Moreover, SOA Governance will require that consistent policies are used throughout the entire services life cycle. This will require SOA Governance software and most companies will probably decide that having the SOA Governance software tightly integrated with their BPMS system in a holistic platform will be the most effective arrangement.

How SOA is Understood

As with BPM, we asked about the respondents’ knowledge of SOA. Compared with their BPM experience the respondents have much less practical experience with SOA. (See Figure 11.) Where a majority (52%) say they have delivered a successful BPM project, only 20% say

they have delivered a successful SOA project. Over half (63%), though, report having at least a good theoretical understanding of SOA.

11. How would you characterize your understanding of Service Oriented Architecture (SOA)? (Choose one)			
I have little to no understanding of SOA		38	11%
I am aware of SOA and have a very basic understanding of it		89	26%
I have a good theoretical understanding of the general concepts and benefits of SOA		150	43%
I have practical experience delivering successful projects with SOA		71	20%
Total		348	100%

Figure 11. How organizations understand SOA

Europeans seem to have a slightly better understanding and more experience with SOA. As you might expect, IT managers and developers know more about SOA than business managers.

SOA Governance

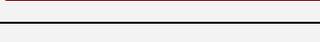
SOA Governance is focused on the management of SOA. In essence, SOA governance is an IT concern. The IT organization, once it has familiarized itself with the capabilities of SOA and made the decision to implement it, usually proceeds to plan for the long term implementation of SOA, its maintenance and the ongoing management of the SOA lifecycle. Thus, in a sense, the interest organizations have in SOA governance, and especially in the governance of SOA-BPM initiatives is a good guide to their overall maturity. (For a good discussion of SOA maturity, and the role of SOA governance, see the paper by Srikanth Inaganti and Sriram Aravamudan, the *SOA Maturity Model*, published on www.bptrends.com in April of 2007.)

In Figure 12, you can see that organizations recognize the importance of SOA governance and the relationship between SOA governance and BPM initiatives. Whether the organizations simply suspect that the relationship is important or have experience with BPM and SOA, 29% say that it is important and 24% say it is very important.

12. SOA Governance is the use of structured relationships, policies and IT processes to produce managed outcomes for services. How important is SOA Governance to your BPM initiatives? (Choose one)			
Not important		37	11%
Of interest		58	17%
Somewhat important		67	19%
Important		100	29%
Very important		82	24%
Total		344	100%

Figure 12. How important is SOA Governance to your BPM initiatives?

In Figure 12a we have filtered out the respondents from Consulting and Computing companies. In this case, interestingly, slightly less emphasis is placed on the importance of SOA governance.

12a. SOA Governance is the use of structured relationships, policies and IT processes to produce managed outcomes for services. How important is SOA Governance to your BPM initiatives? (Choose one)			
Not important		26	17%
Of interest		31	20%
Somewhat important		26	17%
Important		35	22%
Very important		38	24%
Total		156	100%

**Figure 12a. How important is SOA Governance to your BPM initiatives?
(Computer and consulting companies filtered out.)**

More interesting is the differing emphasis on SOA Governance between respondents from Europe and North America. Europeans (See Figure 12b) are much more likely to see SOA Governance as important or very important, while respondents from North America (See Figure 12c) are much less likely to see SOA Governance as important or very important.

12b. SOA Governance is the use of structured relationships, policies and IT processes to produce managed outcomes for services. How important is SOA Governance to your BPM initiatives? (Choose one)			
Not important		8	5%
Of interest		17	11%
Somewhat important		27	18%
Important		54	35%
Very important		48	31%
Total		154	100%

Figure 12b. How important is SOA Governance to your BPM initiatives?
(European Respondents.)

12c. SOA Governance is the use of structured relationships, policies and IT processes to produce managed outcomes for services. How important is SOA Governance to your BPM initiatives? (Choose one)			
Not important		20	21%
Of interest		20	21%
Somewhat important		19	20%
Important		23	24%
Very important		14	15%
Total		96	100%

Figure 12c. How important is SOA Governance to your BPM initiatives?
(North American Respondents.)

Who Manages SOA Governance

Figure 13 underlines the point we made about SOA governance being primarily an IT concern. Fifty-five percent (55%) of respondents suggest that Enterprise Architects are responsible for creating SOA governance policies. About an even number of respondents assign the role to a Governance Specialist (28%) or a Business Analyst (25%). The percentages were not much changed when we filtered out the computer and consulting companies.

13. What roles are responsible for creating SOA governance policies in your organization? (You may choose more than one)			
Business Analyst		81	25%
Governance Specialist		88	28%
Enterprise Architect		176	55%
Developer		52	16%
Business User		36	11%
Other, please specify		36	11%

Figure 13. What roles are responsible for creating SOA governance policies in your organization?

Americans and Europeans both are likely to assign the job to an Enterprise Architect. Beyond that, North Americans are slightly more likely to assign the job to a Business Analyst (26%) while Europeans are more likely to give the job to a Governance Specialist (37%).

BPM and SOA

Business Process Management, in its generic sense, does not necessarily involve software or automation, although it's a rare business process, these days, that doesn't rely on some computer-based support. Still, there are many business process improvement projects that focus entirely on the flow of activities and the tasks people perform and do not focus on any software elements.

SOA is usually associated with BPMS. Again, it's possible to develop a Business Process Management Software system that does not rely on a Service Oriented Architecture. Several of the early BPMS vendors offer products that rely on proprietary architectures. Today, however, most vendors are converting to SOA.

In the last few years, it has become popular to build maturity models to describe the evolution of a wide variety of different types of corporate practices. Recently, a number of organizations have developed SOA Maturity Models. webMethods, Wipro Technologies, IBM, BEA, Systinet and Zapthink, for example, have all proposed SOA Maturity Models.

An interesting feature of the various SOA maturity models is that they assume the co-existence of a certain level of business process maturity, at some point, if SOA maturity is to continue to evolve. Thus, according to the webMethods SOA Maturity Model, for example, an organization can achieve SOA Maturity Level 1 to Level 3, without a significant focus on business process, but the achievement of Level 4 requires that an organization has also achieved Level 3 on the business process maturity model. Similarly, achievement of Level 5 on the webMethods SOA maturity scale assumes an organization that is also at Level 4 on the CMMI scale.

In other words, an organization can begin to explore SOA in an ad hoc way and link specific services to specific software applications without much emphasis on business processes. One can even advance to the development of departmental SOA applications that rely on loosely coupled services without requiring a clearly defined business process. Once one attempts to move beyond level 3 on the SOA maturity scale to achieve significant reuse and to and develop cross-business unit systems, however, one needs to have well-defined business processes.

At level 4 and beyond, however, it is the processes that define what the services will do. Thus, a company can understand where there are opportunities to reuse the services if it has a more-or-less comprehensive understanding of its business processes. Similarly, a company can only identify opportunities for the reuse of services by first understanding where similar activities are performed.

Services, after all, are simply software components that can be called via the Internet and which provide clearly specified functions. To use services, one needs a Business Process Management Software (BPMS) application that will call for the services when they are needed. Thus, any organization that will be interested in using SOA in conjunction with BPM will necessarily have begun to explore the use of BPMS applications to automate the execution of runtime processes. Without automated processes there is no need for services.

Figure 14 shows a traditional business process maturity stair step model, with the five levels in gray boxes, moving from the lower left to the upper right. We had added five steps from

the webMethods SOA Maturity Model to show how they interact. An organization can move from SOA Level 1 to Level 3 without too much emphasis on process. In effect, the IT group is just exploring how to use the Internet protocols and to structure services. Once one reaches Level 4, however, the organization's success with SOA depends on its ability to define its processes and the relationships between them. Thus, in effect, at SOA Level 4, SOA's success depends on having the kind of business process architecture that an organization achieves at Level 3 on a Process Maturity scale.

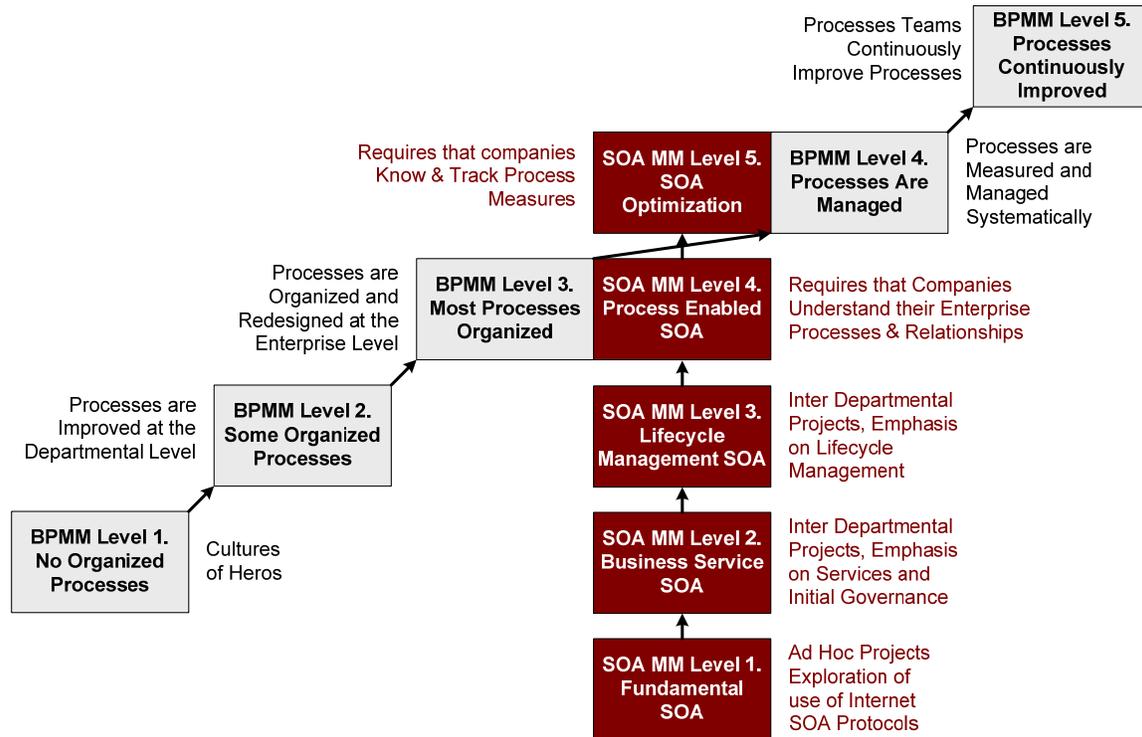


Figure 14. The Intersection of Business Process Maturity and SOA Maturity.

BPM does not necessarily require BPMS. BPMS products do not necessarily need to be based on a Service Oriented Architecture. There are other ways BPMS applications can call software modules. SOA, however, is currently the architecture of choice for those designing today's corporate applications and SOA does require BPMS, or something very like it if it is to realize its potential. This means that once today's enterprise architects and developers are finished exploring the initial, infrastructure-level issues associated with SOA and advance to serious applications they will necessarily become very concerned with the organization's BPMS efforts.

We asked two questions to explore how the respondents felt about the relationship between BPM and SOA.

The Relationship Between BPM and SOA

Most readers think that BPM and SOA complement each other and should be integrated. Only a few, however, think that SOA is essential for a successful BPM project. (See Figure 15.) Forty Percent (40%) see BPM as more successful and beneficial when implemented in

an SOA environment and 34% feel the reverse – that SOA is more successful when tied to BPM. Only 7% see SOA as essential to BPM while 19% think BPM is essential to a successful SOA implementation. These attitudes probably reflect the relative unfamiliarity with SOA compared to BPM.

15. Which of the following statements best describes your view of BPM and SOA? (Choose one)			
You should not approach BPM without SOA		23	7%
SOA cannot, ultimately, be successful without a BPM overlay		65	19%
BPM is more successful and drives more benefits when deployed in an SOA environment		134	40%
SOA is more successful and has more business relevance when tied to BPM		115	34%
Total		337	100%

Figure 15. What is your view of BPM and SOA?

We analyzed this question in various ways and found no significant differences between respondents from Europe or North America, or respondents from IT or business.

What Organizations Are Doing With BPM and SOA

Looking beyond attitudes about the necessity of using BPM and SOA together, we wanted to explore what companies are actually doing with BPM and SOA. Fully ninety percent (90%) of the respondents say they are using BPM or SOA, or both. (See Figure 16.)

Looking at the entire set of 342 responders to this set of questions it appears that more are using the two technologies together (34%) than separately (26%) and roughly the same number of respondents are either using one or the other.

16. Which of the following best describes the status of BPM and SOA in your organization? (Choose one)			
We have SOA initiatives but no BPM initiatives		14	4%
We have BPM initiatives but no SOA initiatives		91	27%
We have both BPM and SOA initiatives but they are separate		88	26%
We are utilizing both BPM and SOA together on projects		115	34%
We are not using either BPM or SOA		34	10%
Total		342	100%

Figure 16. What is the status of BPM and SOA in your organization?

It's possible to understand these numbers better if you recall that an organization can explore SOA, initially, without necessarily being concerned with processes, but that it can't achieve Level 3 maturity without having a BPM architecture to structure its services. Thus, we would expect some organizations to begin SOA without realizing how tightly tied it is to BPM and BPMS, but we would expect organizations that were more experienced to find that there is a tight connection between BPM, BPMS and SOA.

The numbers in Figure 16 reverse once we filter out the computer and consulting companies. (See Figure 16a.) Without respondents from computer or consulting companies, only 20% say they are using BPM and SOA together and 34% say they are using them separately.

16a. Which of the following best describes the status of BPM and SOA in your organization? (Choose one)			
We have SOA initiatives but no BPM initiatives		12	8%
We have BPM initiatives but no SOA initiatives		44	29%
We have both BPM and SOA initiatives but they are separate		53	34%
We are utilizing both BPM and SOA together on projects		31	20%
We are not using either BPM or SOA		14	9%
Total		154	100%

**Figure 16a. What is the status of BPM and SOA in your organization?
(Computer and consulting companies filtered out.)**

Both business process change and component based services, in various guises, have been around for a long time. In their current form, however, they are relatively new. BPM became popular around 2003 and SOA became popular about two years later. (The first BPM conferences were in 2003. The first SOA conferences were in 2006.) In other words, we would expect that more respondents would have heard about BPM and have gained some experience with it than those respondents that had heard about and experimented with SOA. In the past two years, both topics have been hot, and they have often been joined together.

The first BPM tools were based on earlier technologies, and not on SOA. In the past two years, however, there has been a major shift towards SOA. Similarly, the first books on SOA mentioned BPM, but did not place the emphasis on the relationship between the two that has been placed on it in the past two years. In other words, the response of our respondents is pretty much what one might expect. More have heard of BPM than SOA, and most have, recently, begun to think of them as related technologies. As companies experiment with SOA and become more mature, we are confident that they will begin to appreciate the critical relationship between sophisticated SOA applications and a comprehensive business process architecture.

If we remove the computer companies and consultants, who tend to be more focused on implementing the latest technology, we see that most companies are even less likely to have combined BPM and SOA techniques and are more likely to be learning about both technologies and have yet to begin to explore exactly how they work together.

Conclusions

The conclusions drawn from this survey can not be applied to all businesses, but only to those businesses whose managers are interested enough in business process issues to visit www.bptrends.com. Given that qualification, however, the 348 respondents guarantee that we can draw significant conclusions about the group we are studying.

We still think the BPM market has a ways to go. Most of the existing BPM products are only beginning to incorporate SOA technologies, or BI technologies, for example. In a similar way, BPMS vendors are just beginning to acquire BI vendors and incorporate BI into their products. Increasingly, however, most companies will want BPMS products that are specifically designed for SOA environments and have SOA Governance capabilities and metamodels built right into the product. Significantly, the leading BPMS vendors are some of the leaders in combining SOA and BPM.

At the beginning of last year we suggested that 2006 would be the year that companies learned about the value of combining SOA and BPMS. That lesson has largely been learned and companies are increasingly aware of the relationship between SOA and BPMS and are beginning to demand tools that combine the two technologies.

If we were to venture advice, based on the findings reported in this survey, they would be as follows:

- If you don't already understand the relationship between BPMS and SOA, you should definitely learn more about this.
- Similarly, if you know something about SOA, but haven't considered what types of SOA Governance you will need to assure that services can be consistently accessed by your processes, you should definitely learn more about SOA Governance issues. One way to approach this is to study the various SOA Maturity Models to see what needs to be managed as your organization increases its commitment to SOA.
- If you are considering acquiring a BPMS tool, you should determine how it supports SOA. Look especially for tools that support the lifecycle management of services.
- If you don't have a BPM Center of Excellence, create one. Recall that in our last survey we found that companies with a BPM Center of Excellence were much more likely to have successful projects. If you have a BPM Center of Excellence, be sure that both business and IT are well represented. Process definition is primarily the responsibility of business managers. Increasingly, however, as companies commit to BPMS tools, they are committing to working on process improvement at the same time that they seek to automate and manage processes with BPMS software products. Moreover, as we have seen in this survey, increasingly, BPMS products will rely on services that are delivered via the Internet. Thus, it is critical that business process professionals and IT people work together to plan how companies can best take advantage of the opportunities that are being created by BPMS and SOA products.